

10586661

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/077549 A1

(51) International Patent Classification⁷: B05D 1/26, H01L
21/28, 21/288, 21/3205, 21/336, 29/786

(21) International Application Number:
PCT/JP2005/002681

(22) International Filing Date: 15 February 2005 (15.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-040499 17 February 2004 (17.02.2004) JP

(71) Applicant (for all designated States except US): SEMI-
CONDUCTOR ENERGY LABORATORY CO., LTD.
[JP/JP]; 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): FUJII, Gen [JP/JP];
c/o SEMICONDUCTOR ENERGY LABORATORY CO.,
LTD., 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).

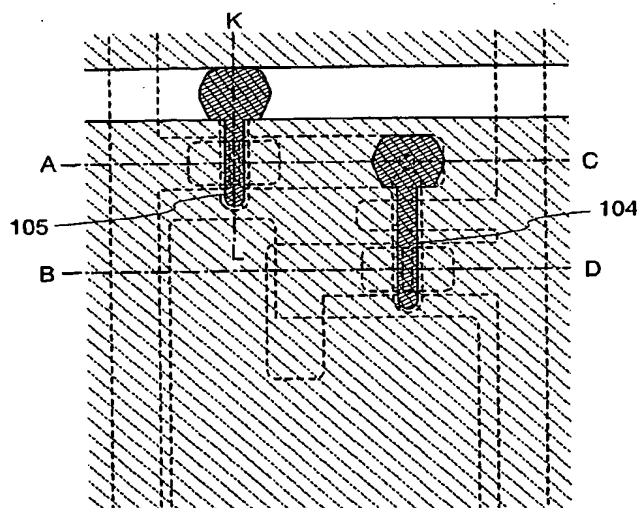
(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

[Continued on next page]

(54) Title: THIN FILM TRANSISTOR AND DISPLAY DEVICE, AND METHOD FOR MANUFACTURING THEREOF



(57) Abstract: The present invention discloses a display device and a manufacturing method thereof by which a manufacturing process can be simplified. Further, the present invention discloses technique for manufacturing a pattern such as a wiring into a desired shape with good controllability. A method for forming a pattern for constituting the display device according to the present invention comprises the steps of forming a first region and a second region; discharging a composition containing a pattern formation material to a region across the second region and the first region; and flowing a part of the composition discharged to the first region into the second region; wherein wettability with respect to the composition of the first region is lower than that of the second composition.

WO 2005/077549 A1



(48) Date of publication of this corrected version:

24 November 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(15) Information about Correction:

see PCT Gazette No. 47/2005 of 24 November 2005, Section II

105 86 661

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/077549 A1

(51) International Patent Classification⁷: B05D 1/26, H01L
21/28, 21/288, 21/3205, 21/336, 29/786

(21) International Application Number:
PCT/JP2005/002681

(22) International Filing Date: 15 February 2005 (15.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-040499 17 February 2004 (17.02.2004) JP

(71) Applicant (for all designated States except US): SEMI-
CONDUCTOR ENERGY LABORATORY CO., LTD.
[JP/JP]; 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).

(72) Inventor; and

(75) Inventor/Applicant (for US only): FUJII, Gen [JP/JP];
c/o SEMICONDUCTOR ENERGY LABORATORY CO.,
LTD., 398, Hase, Atsugi-shi, Kanagawa 2430036 (JP).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

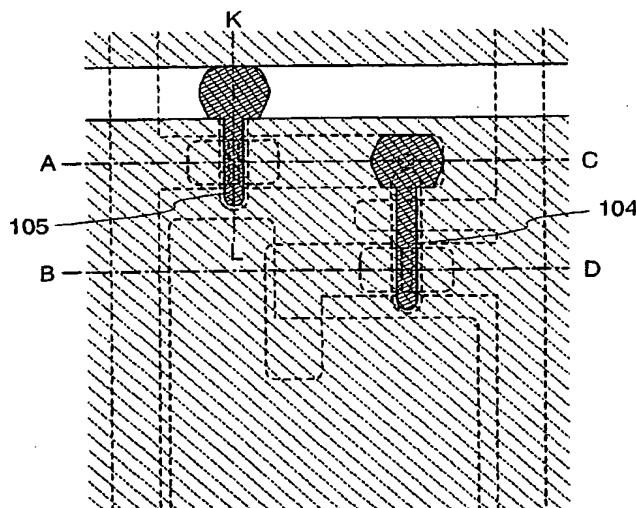
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LI, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: THIN FILM TRANSISTOR AND DISPLAY DEVICE, AND METHOD FOR MANUFACTURING THEREOF



(57) Abstract: The present invention discloses a display device and a manufacturing method thereof by which a manufacturing process can be simplified. Further, the present invention discloses technique for manufacturing a pattern such as a wiring into a desired shape with good controllability. A method for forming a pattern for constituting the display device according to the present invention comprises the steps of forming a first region and a second region; discharging a composition containing a pattern formation material to a region across the second region and the first region; and flowing a part of the composition discharged to the first region into th

WO 2005/077549 A1